June 17, 2004

Margit Hentschel
Natural Resources Department
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Fort Collins, CO 80522

Subject: Comments on PSCO (Xcel Energy) Preliminary Remedial Alternatives, Poudre River

Margit,

I have reviewed the documents presented by Public Service Company (PSCO, dba Xcel Energy) at the May 21, 2004 meeting on the proposed Poudre Removal Action. The documents include:

"Preliminary Technical Evaluation of Remedial Alternatives, Poudre River" which provides a summary of the seven alternatives in a spreadsheet format.

Draft Plan and Cross Section Figures for the seven alternatives, dated March 18, 2004.

Project timeline figure, Fort Collins Poudre River Site, Proposed PSCO Actions to Address NAPL, dated May 21, 2004.

RETEC Powerpoint handout, "Poudre Removal Action, Project Technical Meeting, May 21, 2004" which summarizes preliminary remedial objectives, scope of work, and pathways.

Preliminary Remedial Objectives

The Preliminary Remedial Objectives do not include achievement of any water quality standards for contaminants reaching the Poudre River, or human or ecological receptors affected by any release to the Poudre River. Such standards might include applicable Colorado or Federal numerical criteria for polycyclic aromatic hydrocarbons or other constituents of the NAPL in surface water. Standards might also include risk-based criteria for human or ecological receptors.

There was some discussion at the May 21, 2004 meeting of the need to determine applicable water quality standards, and the need to implement of a monitoring program to insure that any applicable standards are achieved by the remedial action. I understand these matters are under consideration by PSCO and EPA

NAPL Risk Analysis (Key Deliverables)

It is not clear whether Key Deliverables will include a risk assessment for the NAPL, and determination of applicable risk-based criteria for components of the NAPL.

Consideration of Additional Alternatives, Land Use, Other Objectives

This section of the Poudre River is adjacent to City park and recreation facilities, and very close to the City's downtown. The river and its south bank are significant potential recreational assets (location of the annual Poudre River Festival, soccer fields and bike path), and are part of the City's long term plans for its Downtown River Corridor. The planning for this remedial action should involve the City's input on ecological enhancement and river restoration, habitat improvement, public access, and possible long-term uses such as fishing, kayaking, picnic areas, wading, etc. Installation of remedial systems may limit options for future changes and improvements. Consideration of future uses of the area should be incorporated into the selection of a remedial action, rather than being delayed into a "site restoration" plan, after the remedial alternative is fixed.

For example, the Poudre River was significantly straightened from its natural course during the 20th Century. Maps and aerial photographs show significant meander of the river in the location of the proposed remedial action, prior to straightening. Groups and individuals in Fort Collins have suggested restoration of meander and oxbow features that were lost in this area, to restore natural, ecological qualities of the river. These suggested actions pre-date the discovery of the coal tar releases to the river.

Although time is one important factor, some desirable changes in the river might be incorporated into the remedial alternative selection process. Remedial effectiveness and affordability, and other environmental values might be advanced by considering new options, including ones that do not limit the final path of the river to current conditions. For example, perhaps a more natural curvature of the river's path would carry it to the north of the area where most NAPL now is identified, and where it now enters the river. This might allow almost all of the known NAPL to be contained behind containment systems. Aerial photographs show that the river had followed a much more curved path, sometimes to the north of its current path in this affected area, in relatively recent years.

Improvements in ecological, hydraulic and other conditions might be achieved, and significant improvement in the effectiveness of the remediation might be achieved, if, rather than solely attempting to remove the contamination from the river, some consideration is given to removing the river from the contamination. Recent data on the extent of NAPL migration indicate that a small displacement of the containment and river

to the north may provide a much more effective, and perhaps more cost effective remedial action. Some support might be available from agencies like the Army Corps of Engineers (or others) that promote restoration of natural river hydraulics and ecology.

Additional Comments

On June 16, 2004, WALSH received a copy of the evaluation of proposed alternatives prepared by Tetra Tech EMI, Inc. We are reviewing their evaluation, and, in general, concur that there is more experience, and therefore somewhat more certainty, in the vertical containment systems, than in the systems designed to provide interception of the upward migration of NAPL in the river bed.

Sincerely,

Hal Stuber, Ph.D.,
Environmental Chemist